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Apr 21, 1992

US-PAT-NO: 5107065

DOCUMENT-IDENTIFIER: US 5107065 A

TITLE: Anti-sense regulation of gene expression in plant cells

DATE-ISSUED: April 21, 1992

INVENTOR-INFORMATION:

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Shewmaker; Christine K.	Davis	CA	N/A	N/A
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NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
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APPL-NO: 7/ 240408

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PARENT-CASE:

This is a continuation of application Ser. No. 920,574, filed Oct. 17, 1986, now abandoned, which is a continuation-in-part of application Ser. No. 845,676, filed Mar. 28, 1986, now abandoned.

INT-CL: [5] A01H 1/04, C12N 15/00, C12N 5/00, C07H 15/12

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FIELD-OF-SEARCH: 135/172.3, 135/240.4, 135/320, 536/27, 800/1, 800/205, 435/320.1

REF-CITED:

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Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 4535060	August 1985	Comai	435/172.3
<input type="checkbox"/> 4801540	January 1989	Hiatt et al.	435/172.3

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY
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0140308	August 1985	EPX
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ART-UNIT: 184

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ABSTRACT:

Regulation of expression of genes encoded for in plant cell genomes is achieved by integration of a gene under the transcriptional control of a promoter which is functional in the host and in which the transcribed strand of DNA is complementary to the strand of DNA that is transcribed from the endogenous gene(s) one wishes to regulate. The integrated gene, referred to as anti-sense, provides an RNA sequence capable of binding to naturally existing RNAs, exemplified by polygalacturonase, and inhibiting their expression, where the anti-sense sequence may bind to the coding, non-coding, or both, portions of the RNA. The antisense construction may be introduced into the plant cells in a variety of ways and be integrated into the plant genome for inducible or constitutive transcription of the anti-sense sequence. A wide variety of plant cell properties may be modified by employing this technique.

The pCGN978xK12 was deposited at the A.T.C.C. on Mar. 25, 1986, and given Accession No. 67064 and pCGN1401 was deposited on Oct. 7, 1986 at the A.T.C.C. and given Accession No. 67227.

31 Claims, 2 Drawing figures